

A NEW *DACTYLOLABIS* OSTEN SACKEN (DIPTERA: TIPULIDAE)  
FROM NORTH CAROLINA

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*Abstract.*—The male of *Dactylolabis (D.) sohiyi*, new species, from North Carolina is described and illustrated. It is compared with *D. pemetica* Alexander, the only other American species of *Dactylolabis* with a greatly enlarged stigmal area on the wing.

*Key Words:* Tipulidae, Limoniinae, *Dactylolabis*, alar stigma

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While collecting Tipulidae in western North Carolina in the spring of 1999, one of us (DAR) found an unusually large *Dactylolabis* Osten Sacken with distinctive wings. A search for this remarkable fly in the spring of 2001 yielded no further specimens. We therefore describe it here in the hope that other entomologists in the region will learn more about the species. The description is based on one male, pinned after original preservation in alcohol.

*Dactylolabis (Dactylolabis) sohiyi*  
Byers and Rossman, new species  
(Figs. 1-3)

*Description.*—*Head:* Dorsum gray, pruinose, with short, pale setae; posterior vertex and occiput brown with slight pruinosity; longer, black setae above and behind eyes. Rostrum brown, palps darker brown. Antenna dark brown, with 14 flagellomeres.

*Thorax:* Mesonotum dark reddish brown, with weakly defined, broad median stripe of slightly darker brown and diffuse, shorter stripe at each side; posterior scutum and scutellum darker, nearly dull black. Pleural areas and coxae light grayish tan. Halter light tan. Femora yellowish brown

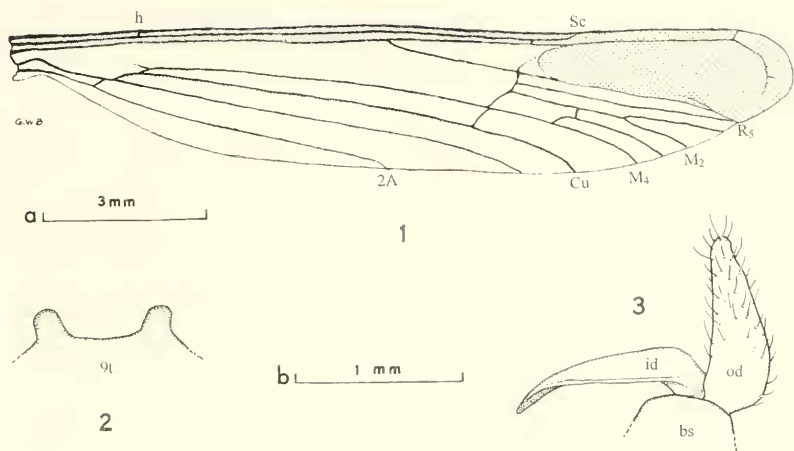
near base but mostly brown; tibiae brown; tarsi dark blackish brown.

*Wings* (Fig. 1): Pale yellowish brown; costal margin slightly undulate; stigma unusually large, light brown, extending from C to R<sub>4</sub> and R<sub>5</sub> and from just beyond fork of R<sub>5</sub> to apex of wing; veins C, Sc and R dark brown, membrane along Cu and 2A somewhat lighter brown. Anterior arculus absent but vestige of it present as basal spur off M at level of humeral crossvein.

*Abdomen:* Most terga grayish brown with narrow, paler posterior borders; sterna light gray. Segments 8 and 9 light brown. Two bluntly rounded projections from posterior edge of tergum 9 (Fig. 2), creating broadly U-shaped median indentation. Outer dististyles (Fig. 3) tapering from base to tip, with numerous setae; inner dististyles smooth, slightly twisted apically, without setae, directed mesad with apices crossing (in preserved specimen).

*Measurements:* Body length (in fluid) 8.8 mm. Wing length 13.9 mm. Antenna about 2.9 mm. Femora (legs 1-3): 7.6, 7.6 and 8.8 mm. Tibiae: 7.8, 6.9 and 7.3 mm. Tarsi: 6.2, 6.4 and 5.4 mm.

*Holotype.*—Male collected from rock



Figs. 1-3. *Dactylolabis sohiyi*, male. 1. Wing, showing enlarged stigmal area (coarser shading). 2. Ninth abdominal tergum, dorsal aspect. 3. Apex of left basistyle and dististyles, dorsolateral aspect; bs—basistyle, id—inner dististyle, od—outer dististyle. Scales: a—Fig. 1, b—Figs. 2-3.

wall in Hickory Nut Gorge at Chimney Rock Park, elevation approximately 2,100 feet, Rutherford Co., North Carolina, on 19 April 1999, by D. Rossman. The specimen has had one wing and the terminal abdominal segments dissected off but glued (water-soluble glue) to the cardboard point bearing the rest of the fly. The fore and middle legs are intact; the hind legs are somewhat damaged but also glued to the point. Deposited in the Snow Entomological Division, Natural History Museum, University of Kansas, Lawrence. When captured, the fly was "scuttling up a sheer, dry rock face." At the time *D. sohiyi* was collected, *D. montana* (Osten Sacken) was also present and fairly common, although in more shaded situations at a slightly lower elevation.

**Etymology.**—The specific epithet, *sohiyi*, comes from the Cherokee and means "place of the hickory nut," a reference to Hickory Nut Gorge, of which the Chimney Rock area forms the southern wall. The name was chosen to honor the indigenous people of the region, for whom the Gorge

was important in one of their myths (Rossman 1988).

**Discussion.**—Of the 19 Nearctic species of *Dactylolabis* named and described previously, 13 are western, one is boreal-arctic, and five occur in eastern North America. In only one of these five, *D. pemetica* Alexander, does the male have the stigmal area of the wings greatly enlarged. The known range of *D. pemetica* extends from Maine southward to North Carolina, where it may overlap the range of *D. sohiyi*. Accordingly, males of these two species may be usefully compared. Most noticeable are differences in the wings: those of *D. sohiyi* are about 46% longer than the greatest recorded length for *D. pemetica* and about 4.8 mm, longer than the body; and the enlarged stigma in the former appears smooth (with very fine hairs barely visible at high magnification) and distinctly darker than the rest of the wing, as contrasted with "hairy" and "faintly darkened" in *D. pemetica*. Sexual dimorphism in the wings is tentatively presumed to occur in *D. sohiyi* as in *D. pemetica* (Alexander 1936: 288, fig. 1). The

mesonotum in *D. penetica* is almost uniformly dark brown, while in *D. soliyi* it has dark brown stripes on a background of paler reddish brown.

Published illustrations of the ninth abdominal tergum and dististyles (Osten Sacken 1869, Snodgrass 1904) of the male of North American *Dactyolabis* are not very useful for comparison with those of *D. soliyi*. A species similar to *D. soliyi* in these structures is the European *D.(D.) transversa* (Savchenko 1989: 70, fig. 1), which has more typical wings. All these illustrations do, however, indicate a setiferous outer dististyle and smooth inner dististyle; and Osten Sacken's figure of *D. cubitalis* (O.S.) shows a ninth tergum quite different from that of *D. soliyi*. Alexander

(1936) for some reason did not mention male genital structures in describing *D. penetica*.

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